S E C R E T

OSA-1538-71

15 January 1971

MEMORANDUM FOR: Chief, Personnel Division, OSA

SUBJECT : Reduction in Personnel

1. We believe that the Aero Medical Staff (AMS) is at this time reduced to a minimum from which any further reduction would seriously effect our capability to maintain the high, safety standards and regard for the pilot's survivability which has heretofore existed. OSA has never lost a pilot due to Personal-Equipment (P.E.) failure or lack of knowledge on the pilot's part in his ability to properly utilize survival techniques and equipment.

2. Attached is a list of the combined accomplishments of our Physiological Training Officer and Survival Professional over the past few years which has benefited not only OSA but the USAF.

3. In 1970 our Physiological Training Officer saved upwards of [redacted] by closing the contract with ARO of Buffalo Corporation covering their altitude chamber. As a substitute he accomplishes all our pressure-suit indoctrinations and training at the small chamber at [redacted] Without his presence this chamber cannot be operated. [redacted] in collaboration with [redacted] Personal-Equipment personnel,

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S E C R E T

changed our system in order to utilize used S1010 PPA's to fabricate new ones for new pilots and saved tens of thousands of dollars, also enabling us to provide back-up suits for the [redacted] It was with [redacted] 25X1A 25X1A
[redacted] assistance that LOX and cooling problems were solved in the U-2R, again both to OSA and USAF advantage. [redacted] does not have a counterpart at [redacted] he is one of a kind. 25X1A

4. We believe that we give our project pilots an outstanding E&E and Survival Program. The program was reorganized in 1969 and reduced to a level beyond which it was generally felt would not be consonant with the concept of having maximum evasive capabilities and the maximum survival opportunity of the pilot. It should be noted that one of two survival slots at [redacted] was given up last year. Two survival trainers are required by regulation to give most of the survival courses (safety). By having one man [redacted] it enables him to keep up with the scheduled classroom refresher courses. The Headquarters' survival expert, [redacted] 25X1A 25X1A 25X1A
[redacted], is generally fully occupied in planning for survival trips, which from a Headquarters' standpoint, frequently requires liaison with SOD/DDP, Air Force, Navy, Department of Interior, etc. He then is joined by the [redacted] man to run the operation. He is parachute qualified and occupies considerable time with modifying and testing. As will be noted in the attachment, he participated in the development of the S1010 PPA, and its thermal liner as well as many other projects. He also conducts the annual refresher course overseas for the [redacted] pilots. Additional duties have included collaborating on the development of certain techniques for the [redacted] 25X1A 25X1A 25X1A

5. In our opinion Headquarter's AMS and our professional counterparts in the field (Detachments G and H) should be regarded as one unit from a functional standpoint.

If we are to maintain any semblance of previous standards, we believe Headquarter's AMS should remain as is. Should it become mandatory to give up a position, we would suggest that the survival position occupied by [redacted] 25X1A be shifted to [redacted] 25X1A and that a P.E. slot be deleted there. In the event this should occur, we believe that [redacted] 25X1A would spend much of his time here at Headquarters. (This, in turn, would raise problems regarding transportation and per diem.)

[redacted]

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[redacted]

6. It has been contemplated that the ARO tech rep at Detachment H be eliminated and a military P.E. man from Detachment G be substituted in order to give greater flexibility. In view of present personnel exercise, it would seem more appropriate to retain this tech-rep position by substituting a cross-trained, flexible, tech rep for the present one. (D/M was giving up a warehouse man to P.E. to make this possible so that if this tech-rep is

retained, the D/M slot would be available. [redacted] 25X1A of ARO was contacted and indicated he would be happy to exchange tech reps. In 45 days he could present us with a medically-qualified, cross-trained,(seat and suit) man to our liking.

7. We would then suggest that we can give up a P.E. slot at Detachment G which would reduce our total Life Support strength [redacted] 25X1A This action would also make the D/M slot at Detachment H which was being converted to P.E. available as a give-up for a total reduction of two slots plus the fact that [redacted] 25X1A is converting to Contract status.

[redacted] M. D. 25X1A
Chief, Aero Medical Staff
Office of Special Activities

Attachment
As stated above

25X1A C/AMS/OSA/[redacted] (15 Jan 71)
Distribution
1 - Addee
1 - AMS/OSA
1 - " Chrono
1 - RB/OSA

1. Para-sail Training

This is believed to be the only water-launched training program aimed at giving a pilot the complete experience of parachuting into water under conditions of utmost safety. Credits for developing this system belong to the Aero Medical Staff (AMS).

2. Resistance to Interrogation (RTI)

This is a unique system developed with the cooperation of the psychologists of the Office of Medical Services (OMS). They were formerly known as Assessment and Evaluation Staff (A&ES); now it is called Psychological Services Staff (PSS). It is now conducted by the PSS with OSA funding and coordination. The program has gained quite a reputation because of its departure from the conventional, primarily physical, programs of other services. It was investigated thoroughly by the Navy after the Pueblo disaster.

3. Full-Pressure Suit and Thermal Liner

It is fairly ancient history at this point that the first full-pressure suit, 901-J, was an in-house development in conjunction with the David Clark Company and ARO of Buffalo Corporation for the other aircraft. From this suit [redacted] designed the present S1010 PPA which is also used by the Air Force SAC U-2 Program. The essential features of the S1010 were used by Clark to produce the 22S-6 suit which is the standard full-pressure suit used by the USAF in B-57's.

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Of more recent note is the development in 1969 of the thermal liner which greatly enhances the possibility of survival of a pilot downed in cold waters. This improvement has been approved by SAC and is in use in the U-2 Program. It is now being ordered for the SR-71.

The requirement for a modification of the S1010 suit to enable the pilot a longer period of survival was immediately evident to all concerned when a [redacted] 25X1A
25X1A [redacted] One of the first messages received was a query as to his survival possibilities in the cold seas prevalent at that time of year.

25X1A [redacted], our Physiological Training Officer at that time, had immediately contacted [redacted] 25X1A at David Clark Company to initiate research on the problem. Meanwhile, [redacted] made baseline studies 25X1A in the S1010 suit consisting of personally immersing himself in an ice pool, etc., later developing and 25X1A testing the garment at the School of Aviation Medicine, Brooks AFB, Texas, leading to its ultimate adoption. During this period he was assisted by [redacted] and the program was finalized under [redacted]

4. Light-Weight Jungle Hammock

During E&E and Survival Training, it was noted that a one-piece jungle hammock would be of great assistance to the downed pilot, particularly in the SE Asia area. The G.I. issue jungle hammock is too large to fit in the seat kit. AMS designed a new light-weight hammock which was given to the present manufacturer. It now fits into the seat kit and is a selective item on missions where it would be of value.

5. Open-End Raft or Dinghy

25X1A [redacted] noted the difficulty the pilots experienced in boarding an inflated raft in their cumbersome full-pressure suits and personally conceived the idea of a compartmented raft with a separate section on the end which remained uninflated until the man was aboard and then the raft could be secondarily inflated. This was used at the end of the other program and is currently used in all the U-2's and in the SR-71. They also developed a pump that is included in the seat kit which can be used to inflate the hood of the raft as well as to bail it out.

6. White Outer-Coverall for S1010 Suit

Coveralls have always been an O.D. color. The pilots complained of heat from the sun at altitude and on the ground. The back of the hands has also been a source of complaint. [redacted] had a trial white Nomex outer garment made for one pilot and it was so well received, all the pilots are being so equipped. 25X1A

7. Urine-Collecting Device

Faced with the anticipated problems of much longer missions to be flown in the U-2R, [redacted] worked with the Clark Company to develop what is believed to be the only operational suit modification that will allow a pilot to relieve his bladder without encountering any serious difficulties. 25X1A

8. In early 1970 [redacted] jump tested the S1010 suit and found that the legs could not be brought together when landing because of the positioning of the parachute harness in the chute. He then visited the DAvid Clark Company and arranged with them for a modification that has been adopted by all users. 25X1A

9. Six-Line Release

In February 1971 [redacted] is scheduled to jump test a new procedure that substitutes for the six-line cut at El Centro Naval Test Center. If this is accepted, it will become SOP for the RQ-225 Parachute used in the U-2R and SR-71. 25X1A